DEPARTMENT of ENVIRONMENTAL SERVICES Water Supply & Pollution Control Division - Biology Bureau

LAKE TROPHIC DATA

MORPHOMETRIC:

Lake: DEERING	G RESERVOIR	Lake Area (ha):	127.64
	DEERING	Maximum depth (m):	11.3
County:	Hillsborough	Mean depth (m):	3.5
River Basin:		Volume (m³):	4442500
Latitude:	43°03'07" N	Relative depth:	0.9
Longitude:	71°50'28" W	Shore configuration:	2.21
Elevation (ft	t): 921	Areal water load (m/yr	:): 4.54
Shore length	(m): 8850	Flushing rate (yr^{-1}) :	1.30
Watershed are	ea (ha): 1139.6	P retention coeff.:	0.67
% watershed p	ponded: 1.0	Lake type: an	tificial

BIOLOGICAL:	10 February 1998	31 July 1997
DOM. PHYTOPLANKTON (% TOTAL) #1	ASTERIONELLA 85%	ASTERIONELLA 50%
#2	DINOBRYON 10%	CHRYSOSPHAERELLA 30%
#3		DINOBRYON 12%
PHYTOPLANKTON ABUNDANCE (units/mL)		
CHLOROPHYLL-A (µg/L)		2.54
DOM. ZOOPLANKTON (% TOTAL) #1	KERATELLA 37%	KERATELLA 37%
#2	NAUPLIUS LARVA 22%	POLYARTHRA 24%
#3	ASPLANCHNA 13%	
ROTIFERS/LITER	104	110
MICROCRUSTACEA/LITER	44	10
ZOOPLANKTON ABUNDANCE (#/L)	154	120
VASCULAR PLANT ABUNDANCE		Scattered
SECCHI DISK TRANSPARENCY (m)		7.2
BOTTOM DISSOLVED OXYGEN (mg/L)	7.2	0.7
BACTERIA (E. coli, #/100 ml) #1		3
#2		< 1
#3		

SUMMER THERMAL STRATIFICATION:

stratified

Depth of thermocline (m): 6.7 Hypolimnion volume (m^3) : 32500 Anoxic volume (m^3) : 25250

CHEMICAL:	DEERING DEERING	RESERVOIR			
	10 February 1998		31 July 1997		
DEPTH (m)	3.5	7.0	4.0	7.0	9.0
pH (units)	6.1	6.0	6.7	6.9	6.5
A.N.C. (Alkalinity)	5.1	5.6	4.8	4.6	4.9
NITRATE NITROGEN	< 0.05	0.05	< 0.05		< 0.05
TOTAL KJELDAHL NITROGEN	0.20	0.20	0.10	0.30	0.30
TOTAL PHOSPHORUS	0.010	0.009	0.005	0.010	0.023
CONDUCTIVITY (µmhos/cm)	67.6	75.4	60.9	59.4	60.1
APPARENT COLOR (cpu)	< 5	< 5	< 5	8	18
MAGNESIUM			0.55		
CALCIUM			2.8		
SODIUM			7.4		
POTASSIUM			0.38		
CHLORIDE	12	14	11		11
SULFATE	4	4	4		4
TN : TP	20	28	20		13
CALCITE SATURATION INDEX			3.5		

All results in mg/L unless indicated otherwise

TROPHIC CLASSIFICATION: 1997

D.O.	S.D.	PLANT	CHL	TOTAL	CLASS
4	0	1	0	5	Oligo.

COMMENTS:

- 1. AKA Deering Lake.
- 2. Deering Reservoir was previously surveyed in 1980 and was classified mesotrophic. Water clarity was greater and chlorophyll was lower in 1997 as compared to 1980.
- 3. This pond participates in DES' Volunteer Lake Assessment Program and has shown good, stable or slightly improving trophic quality since 1987.
- 4. This pond has clear water, a deep thermocline, and a very small hypolimnion (1% of lake volume) which was mostly anoxic.

Deering Reservoir Deering 10 foot depth contours ۵ 20 30 0.5 Km

FIELD DATA SHEET

TOWN: DEERING

LAKE: DEERING RESERVOIR TOWN: DEERING DATE: 07/31/1997 WEATHER: MOSTLY CLEAR & WARM

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SECCHI DISK (m): 7.2

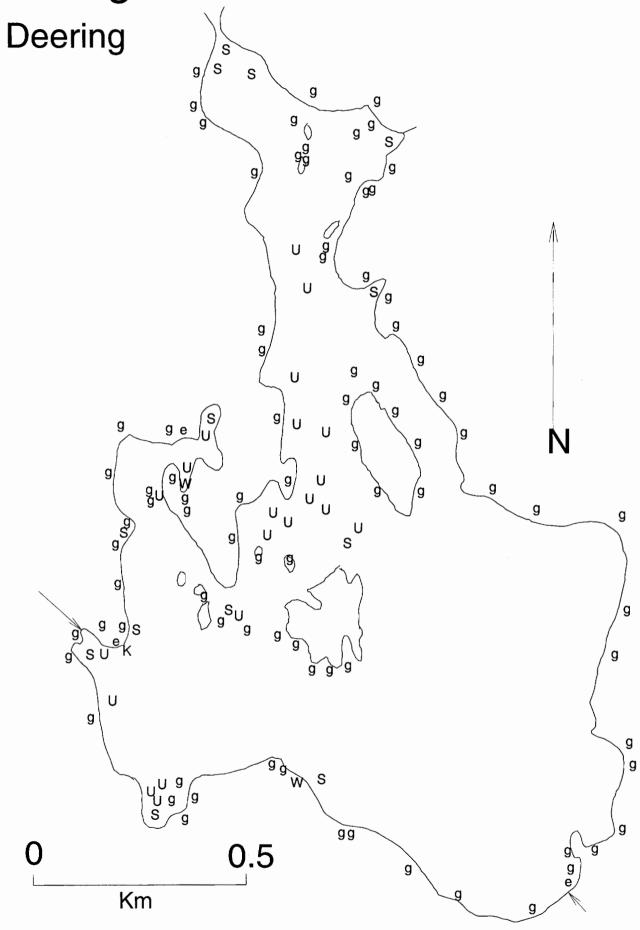
COMMENTS:

BOTTOM DEPTH (m): 11.0

TIME: 1250

*Dissolved oxygen values are in mg/L

Deering Reservoir



AQUATIC PLANT SURVEY

LAK	E: DEERING RESERVOIR	TOWN: DEERING	DATE: 07/31/97
Key	P	LANT NAME	ABUNDANCE
кеу	GENERIC	COMMON	ABONDANCE
g	Myrica gale	Sweet gale	Common
S	Sparganium	Bur reed	Scattered
U	Utricularia	Bladderwort	Common
W	Potamogeton	Pondweed	Sparse
k		Unknown plant	Sparse
е	Eleocharis	Spike rush	Sparse
Е	Eriocaulon septangulare	Pipewort	Sparse
J	Juncus	Rush	Sparse
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	All All		
,			
		OMBRIT ARMS	

OVERALL ABUNDANCE: Scattered

GENERAL I.

- OBSERVATIONS:
 Sweet gale was around much of the shoreline and around the island shores.
- 2. Loons with chicks were sighted.